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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/688,743

10/16/2003

Lester F. Ludwig

2152-3019

2812

35884

7590

09/04/2009

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EXAMINER

FLETCHER, MARLON T

ART UNIT

PAPER NUMBER

2832

NOTIFICATION DATE

DELIVERY MODE

09/04/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|---------------------------------------|--|--|
| Office Action Summary | Application No. 10/688,743 | Applicant(s) LUDWIG, LESTER F. | |
| | Examiner Marlon T. Fletcher | Art Unit 2832 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-101 is/are pending in the application.
- 4a) Of the above claim(s) 77-101 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iba et al. (5,121,669) in view of Pash (3,783,731).

Iba et al. disclose a musical instrument comprising: a plurality of strings (7), wherein each string of said plurality of strings has an associated pitch; a string transducer (10) associated with said string, wherein said string transducer generates an electrical string signal in response to vibrations of said string; a plurality of curved frets (5) coupled to a neck of said musical instrument, wherein each fret (5) of said plurality of curved frets is adapted to distinctly change the vibrating length of said melody string in response to user manipulation; and an interface adapted to provide electrical signals generated by said string transducer to a multi-channel mixer which responsively generates an outgoing audio output signal comprising a mix of received electrical signals (column 11, lines 9-44).

Iba et al. disclose the instrument, said instrument further comprising: a signal processor (40) for generating one or more output signals responsive to at least one electrical signal generated by said string transducer; and wherein said interface is further adapted to provide said one or more output signals generated by said signal processor to said multi-channel mixer (figure 7).

Iba et al. disclose the instrument, said instrument further comprising: a plurality of string transducers (10), wherein each string transducer of said plurality of string transducers (10) is associated with a particular string (7) of said plurality of strings, wherein each string transducer of said plurality of string transducers generates a distinct electrical string signal in response to vibrations of said associated string; and wherein said interface is further adapted to provide electrical transducer signals, generated by each string transducer of said plurality of drone string transducers, to said multi-channel mixer (column 11, lines 25-44).

Iba et al. disclose the instrument, wherein said processing performed by said string signal processor includes controllably performing pitch shifts on said received electrical string signal (column 12, line 65 – column 13, line 8).

Iba et al. disclose the instrument, wherein said multi-channel mixer generates a submix signal comprising a submix of said electrical signals generated by said string transducers, said instrument further comprising: an auxiliary signal processor for generating a processed submix signal responsive to said submix signal, wherein said processed submix signal is communicated to said multi-channel mixer which responsively generates an outgoing audio signal comprising a mix of said processed submix signal and said electrical signals generated by said string transducers (figure 33).

Iba et al. disclose the instrument, wherein said processed submix signal comprises a synthetic resonance characteristic (effector 80), wherein inherently a variety of characteristics can be provided.

Iba et al. do not disclose the use of drone strings.

However, Pash discloses a musical instrument comprising: a melody string (21e); a plurality of drone strings (21a – 21c), wherein each drone string of said plurality of drone strings has an associated pitch (column 3, line 49 – column 4, line 16); a plurality of curved frets (15) coupled to a neck of said musical instrument.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Pash with the teachings of Iba et al., because the teachings provide the ability to use drone and melody strings, wherein an obvious transfer of strings would allow user control of a desired sound.

Official Notice is taken with respect to it being well known in the art to provide string characteristics including: a synthetic twang characteristic; and a synthetic vowel sound characteristic.

Iba et al. disclose the claimed invention except for the chikori strings. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize chikori strings since the equivalence of the function of the strings for their use in the musical art and the selection of any known equivalents would be within the level of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marlon T. Fletcher whose telephone number is 571-272-2063. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MTF

8/30/2009

/Marlon T Fletcher/

Primary Examiner, Art Unit 2832